

Notice of Allowability

Application No.

10/824,896

Examiner

Amy He

Applicant(s)

HASHIMOTO ET AL.

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 29 August 2006.
2. ☒ The allowed claim(s) is/are 12 and 14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Joe Kim on September 26, 2006.

The application has been amended as follows:

In the Claims:

(1) Claim 12 has been replaced with the following:

12. An electric filter comprising:

a plurality of notch filters combined so as to have a predetermined notch filter characteristic, the notch filters having different frequency characteristics and including at least two notch filters each exhibiting asymmetrical gain changes on opposite sides of a cutoff frequency of respective said at least two notch filters.

wherein said notch filters include:

a first notch filter having a first cutoff frequency and
exhibiting substantially symmetrical gain changes at frequencies
below and above said first cutoff frequency;

a second notch filter having a second cutoff frequency lower than said first cutoff frequency, and exhibiting a smaller amount of gain changes and a smaller maximum gain at frequencies below said second cutoff frequency than an amount of gain changes and a maximum gain at frequencies above said second cutoff frequency; and

a third notch filter having a third cutoff frequency higher than said first cutoff frequency, and exhibiting a larger amount of gain changes and a larger maximum gain at frequencies below said third cutoff frequency than an amount of gain changes and a maximum gain at frequencies above said third cutoff frequency.

- (2) Claim 13 has been canceled.
- (3) Claim 14, line 1, "13" has been replaced with --12--.

REASONS FOR ALLOWANCE

- 2. Claims 12 and 14 are allowed.
- 3. The following is an examiner's statement of reasons for allowance:

Claims 12 and 14 are allowable because none of the prior art discloses an electric filter comprising a plurality of notch filters combined to have a predetermined notch filter characteristic, wherein the notch filters include: a first notch filter exhibiting substantially symmetrical gain changes; a second notch filter exhibiting a smaller

amount of gain changes and a smaller maximum gain at frequencies below a second cutoff frequency than an amount of gain changes and a maximum gain above the second cutoff frequency; and a third notch filter exhibiting a larger amount of gain changes and a larger maximum gain at frequencies below a third cutoff frequency than an amount of gain changes and a maximum gain at frequencies above the third cutoff frequency, and in the combination as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

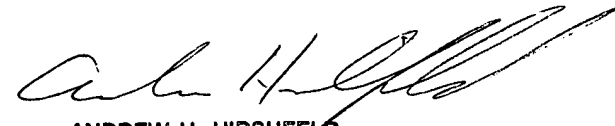
Thomasson (U. S. Patent No. 6, 404,279) discloses a bandpass filter comprising: a bandpass filter 42; a first notch filter 43; and a second notch filter 44.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH 
September 26, 2006.


ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800